

THE CLAIMS

Claims 1-22 and 24-46 are pending in the instant application. Claim 23 has been previously cancelled. Claims 1, 9, 17, 27 and 37 are independent claims. Claims 2-8, 10-16, 18-22, 24-26, 28-36, and 38-46 depend from claims 1, 9, 17, 27 and 37, respectively.

Listing of claims:

1. (Previously Presented) A method for communication, the method comprising:

receiving one or more polling message from an access device by one or more of a plurality of access points in a hybrid wired/wireless local area network;

responsive to said one or more polling message, communicating a load on said one or more of said plurality of access points to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated load; and

communicating information of said determined optimal load balancing for said one or more of said plurality of access points to said access device, wherein said access device selects and re-establishes communication with one or more of said plurality of access points based on said communicated information of said determined optimal load balancing.

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2. (Previously Presented) The method according to claim 1, comprising interpreting said one or more polling message by said one or more of said plurality of access points, which is located in an operating range of said access device.

3. (Previously Presented) The method according to claim 2, comprising selecting an access point from said plurality of access points having a least load and based on a received signal strength of said plurality of access points.

4. (Previously Presented) The method according to claim 1, comprising selecting said one of said plurality of access points, which comprises a least load by said access device to provide service.

5. (Previously Presented) The method according to claim 1, comprising:
sending said received one or more polling message from said one or more of a plurality of access points to a switch using a messaging protocol message;
and
receiving said one or more polling message by said switch.

6. (Previously Presented) The method according to claim 2, comprising determining by said switch at least an aggregate load on at least a portion of said plurality of access points.

7. (Previously Presented) The method according to claim 6, comprising sending information corresponding to said determined aggregate load to at least a portion of said plurality of access points using a messaging protocol message.

8. (Previously Presented) The method according to claim 7, wherein comprising redistributing a load by said switch on said at least a portion of said plurality of access points.

9. (Previously Presented) A computer-readable medium for storing a computer program for execution by computer, having one or more code section for communication, the one or more code section executable by a computer for causing the computer to perform the steps comprising:

receiving one or more polling message from an access device by one or more of a plurality of access points in a hybrid wired/wireless local area network;

responsive to said one or more polling message, communicating a load on each said one or more of said plurality of access points to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated load; and

communicating information of said determined optimal load balancing for said one or more of said plurality of access points to said access device, wherein said access device selects and re-establishes communication with one or more of

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said plurality of access points based on said communicated information of said optimal load balancing.

10. (Previously Presented) The computer-readable medium according to claim 9, wherein said one or more code section comprises code for interpreting said at least one polling message by said one or more of said plurality of access points, which is located in an operating range of said access device.

11. (Previously Presented) The computer-readable medium according to claim 10, wherein said one or more code section comprises selecting an access point from said plurality of access points having a least load and based on a received signal strength of said plurality of access points.

12. (Previously Presented) The computer-readable medium according to claim 9, wherein said one or more code section comprises code for selecting said one of said plurality of access points, which comprises a least load by said access device to provide service.

13. (Previously Presented) The computer-readable medium according to claim 9, wherein said one or more code section comprises code for:

sending said received one or more polling message from said ~~at least~~ one or more of a plurality of access points to a switch using a messaging protocol message; and

receiving said one or more polling message by said switch.

14. (Previously Presented) The computer-readable medium according to claim 10, wherein said one or more code section comprises code for determining at least an aggregate load by said switch on at least a portion of said plurality of access points.

15. (Previously Presented) The computer-readable medium according to claim 14, wherein said one or more code section comprises code for sending information corresponding to said determined aggregate load to at least a portion of said plurality of access points using a messaging protocol message.

16. (Previously Presented) The computer-readable medium according to claim 15, wherein said one or more code section comprises code for redistributing a load by said switch on said at least a portion of said plurality of access points.

17. (Previously Presented) A system for communication, the system comprising:

one or more receiver of one or more of a plurality of access points that receives one or more polling message from an access device in a hybrid wired/wireless local area network;

one or more controller that communicates a load on said one or more of said plurality of access points to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated load in response to said one or more polling message; and

one or more transmitter that communicates information of said determined optimal load balancing for said one or more of said plurality of access points to said access device, wherein said access device selects and re-establishes communication with one or more of said plurality of access points based on said communicated information of said optimal load balancing.

18. (Previously Presented) The system according to claim 17, wherein said one or more controller interprets said one or more polling message, said one or more controller being associated with one or more of said plurality of access points that is located in an operating range of said access device.

19. (Previously Presented) The system according to claim 18, wherein said one or more controller selects an access point from said plurality of access points

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having a least load and based on a received signal strength of said plurality of access points.

20. (Previously Presented) The system according to claim 17, wherein said one or more controller selects said one of said plurality of access points, which comprises a least load by said access device to provide service.

21. (Previously Presented) The system according to claim 17, wherein said one or more transmitter sends said received one or more polling message from said one or more of a plurality of access points to said switch using a messaging protocol message.

22. (Previously Presented) The system according to claim 21, wherein said one or more receiver is operable to receives said one or more polling message.

23. (Cancelled)

24. (Previously Presented) The system according to claim 17, wherein said one or more controller sends information corresponding to an aggregate determined load to at least a portion of said plurality of access points using a messaging protocol message.

25. (Previously Presented) The system according to claim 24, wherein said one or more controller redistributes a load on said at least a portion of said plurality of access points.

26. (Previously Presented) The system according to claim 17, wherein said at least one controller is one or more of: a bandwidth management controller, a quality of service controller, a load balancing controller, a session controller and a network management controller.

27. (Previously Presented) A method for communication, the method comprising:

transmitting one or more polling message from a mobile station in a hybrid wired/wireless local area network, wherein said transmitted one or more polling message causes one or more of a plurality of access points that receives said transmitted one or more polling message to communicate a corresponding load to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated corresponding load;

receiving from said one or more of said plurality of access points, said determined optimal load balancing for said one or more of said plurality of access points; and

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selecting and re-establishing communication by said mobile station with one of said plurality of access points based on said received optimal load balancing.

28. (Previously Presented) The method according to claim 27, comprising re-establishing communication by said mobile station with said one of said plurality of access points based on a received signal strength of said one or more of said plurality of access points.

29. (Previously Presented) The method according to claim 27, comprising selecting said one of said plurality of access points for said re-establishing of said communication based on said determined optimal load balancing and a RSSI associated with one of said plurality of access points.

30. (Previously Presented) The method according to claim 29, comprising selecting said one of said plurality of access points having a least optimal load balancing for said re-establishing of said communication.

31. (Previously Presented) The method according to claim 30, comprising broadcasting said one or more polling message from said mobile station within said hybrid wired/wireless local area network.

32. (Previously Presented) The method according to claim 31, wherein said broadcasted one or more polling message is received by said plurality of access points within said hybrid wired/wireless local area network.

33. (Previously Presented) The method according to claim 32, wherein said switch determines an aggregate load on said plurality of access points based on said determined corresponding load for said one or more of said plurality of access points and said broadcasted one or more polling message.

34. (Previously Presented) The method according to claim 33, wherein said switch reconfigures said one or more of said plurality of access points based on said determined corresponding load for said one or more of said plurality of access points and said broadcasted one or more polling message.

35. (Previously Presented) The method according to claim 27, wherein a load on said one or more of said plurality of access points is redistributed based on one or both of said determined corresponding load of said one or more of said plurality of access points, and said transmitted one or more polling message.

36. (Previously Presented) The method according to claim 27, wherein an aggregate bandwidth of said one or more of said plurality of access points is optimized based on one or both of said determined corresponding load of said one or more of said plurality of access points, and said transmitted one or more polling message.

37. (Previously Presented) A system for communication, the system comprising:

one or more processors in a mobile station, said one or more processors are that transmits one or more polling message from said mobile station in a hybrid wired/wireless local area network, wherein said transmitted one or more polling message causes one or more of a plurality of access points that receives said transmitted one or more polling message to communicate a corresponding load to a switch, wherein said switch determines optimal load balancing for said one or more of said plurality of access points based on said communicated corresponding load;

said or more processors are that receives from said one or more of said plurality of access points, information of said determined optimal load balancing for said one or more of said plurality of access points; and

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said or more processors are that selects and re-establishes communication by said mobile station with one of said plurality of access points based on said information for said determined optimal load balancing.

38. (Previously Presented) The system according to claim 37, wherein said or more processors are that re-establishes said communication by said mobile station with said one of said plurality of access points based on a received signal strength of said one or more of said plurality of access points.

39. (Previously Presented) The system according to claim 37, wherein said or more processors are that selects said one of said plurality of access points for said re-establishing of said communication based on said determined optimal load balancing and a RSSI associated with one of said plurality of access points.

40. (Previously Presented) The system according to claim 39, wherein said or more processors are that selects said one of said plurality of access points having a least optimal load balancing for said re-establishing of said communication.

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41. (Previously Presented) The system according to claim 40, wherein said or more processors are that broadcasts said one or more polling message from said mobile station within said hybrid wired/wireless local area network.

42. (Previously Presented) The system according to claim 41, wherein said broadcasted one or more polling message is received by said plurality of access points within said hybrid wired/wireless local area network.

43. (Previously Presented) The system according to claim 42, wherein said switch determines an aggregate load on said plurality of access points based on said determined corresponding load for said one or more of said plurality of access points and said broadcasted one or more polling message.

44. (Previously Presented) The system according to claim 43, wherein said switch reconfigures said one or more of said plurality of access points based on said determined corresponding load for said one or more of said plurality of access points and said broadcasted polling message.

45. (Previously Presented) The system according to claim 37, wherein a load on said one or more of said plurality of access points is

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redistributed based on one or both of said determined corresponding load of said one or more of said plurality of access points, and said transmitted one or more polling message.

46. (Previously Presented) The system according to claim 37, wherein an aggregate bandwidth of said one or more of said plurality of access points is optimized based on one or both of said determined corresponding load of said one or more of said plurality of access points, and said transmitted one or more polling message.